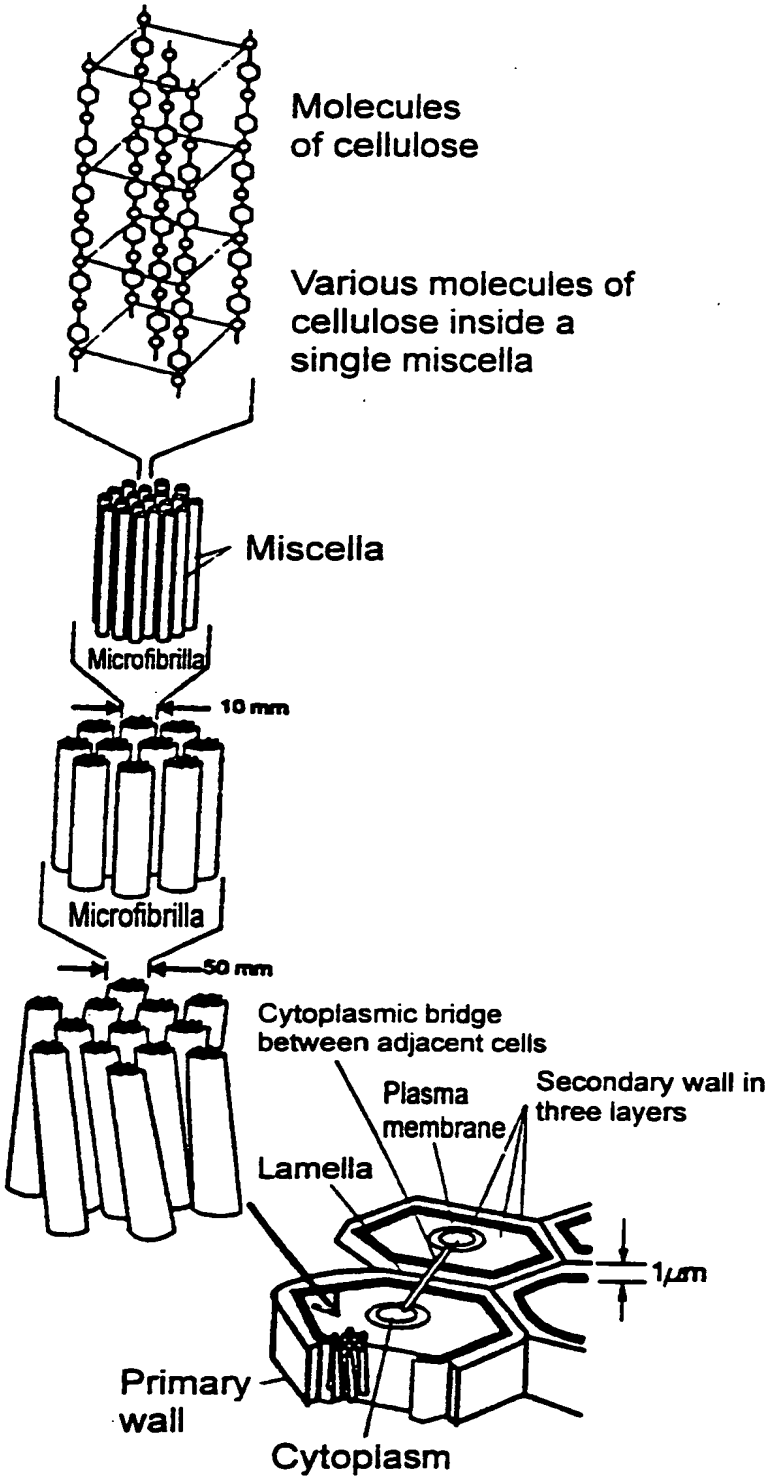


FIG 1 Cellular structure of biomass

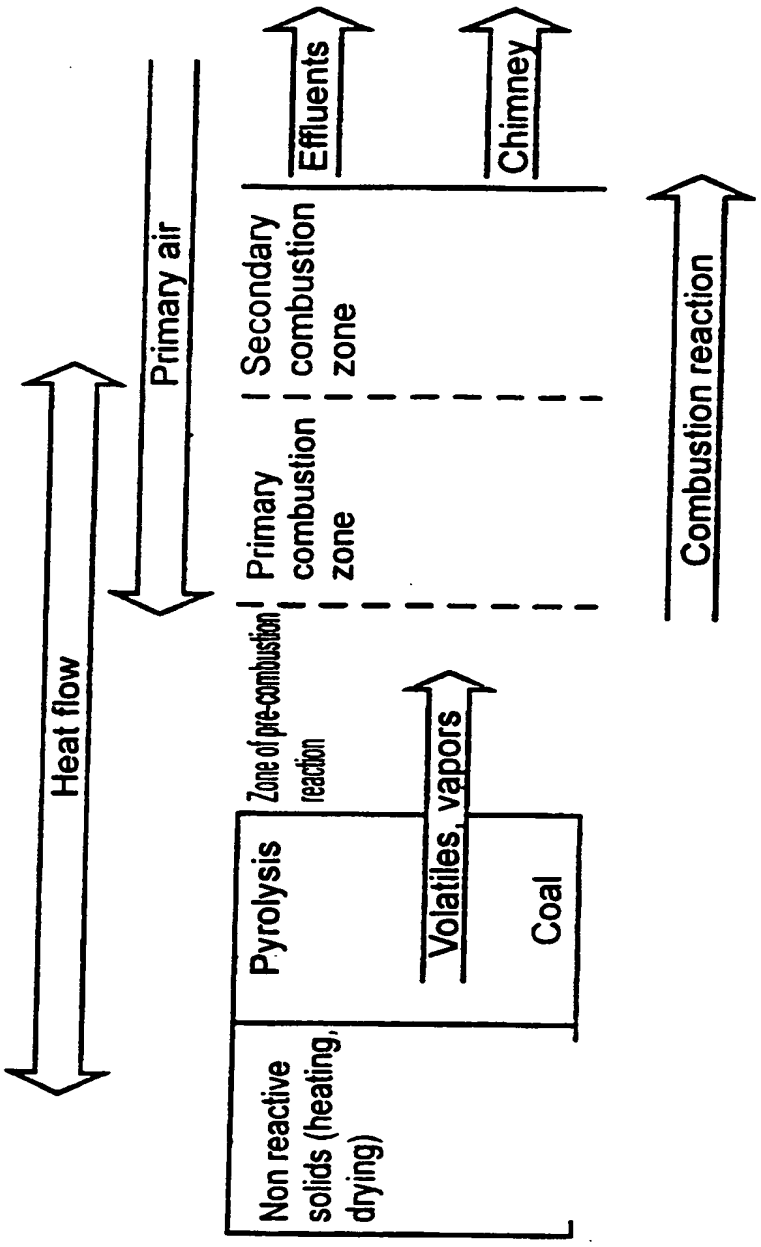


FIG 2

Conceptual model of the combustion of solid fuels.
Complexity of the combustion of wood

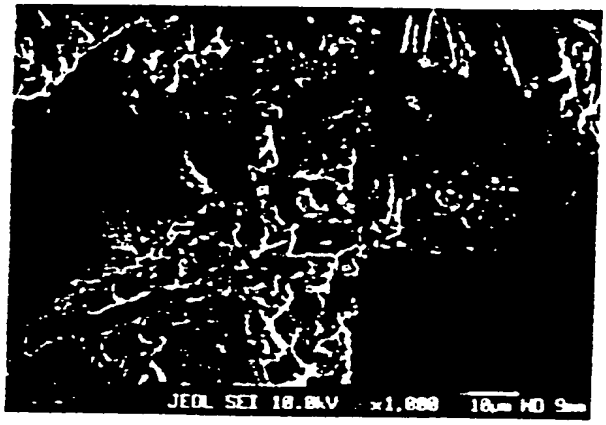


Fig 3a

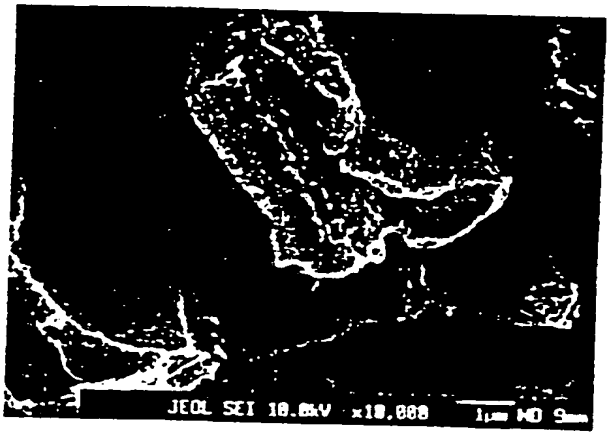


Fig 3b

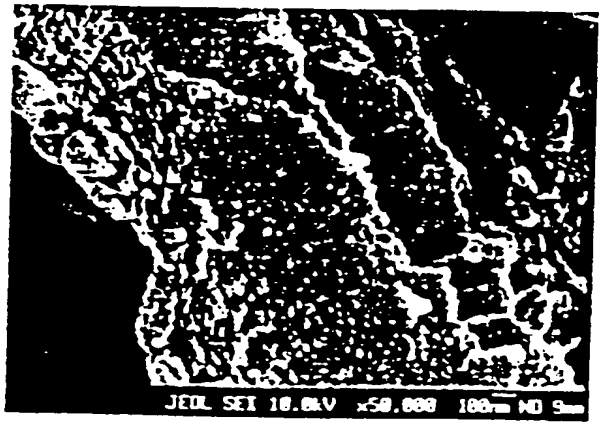


Fig 3c

Fig 3d

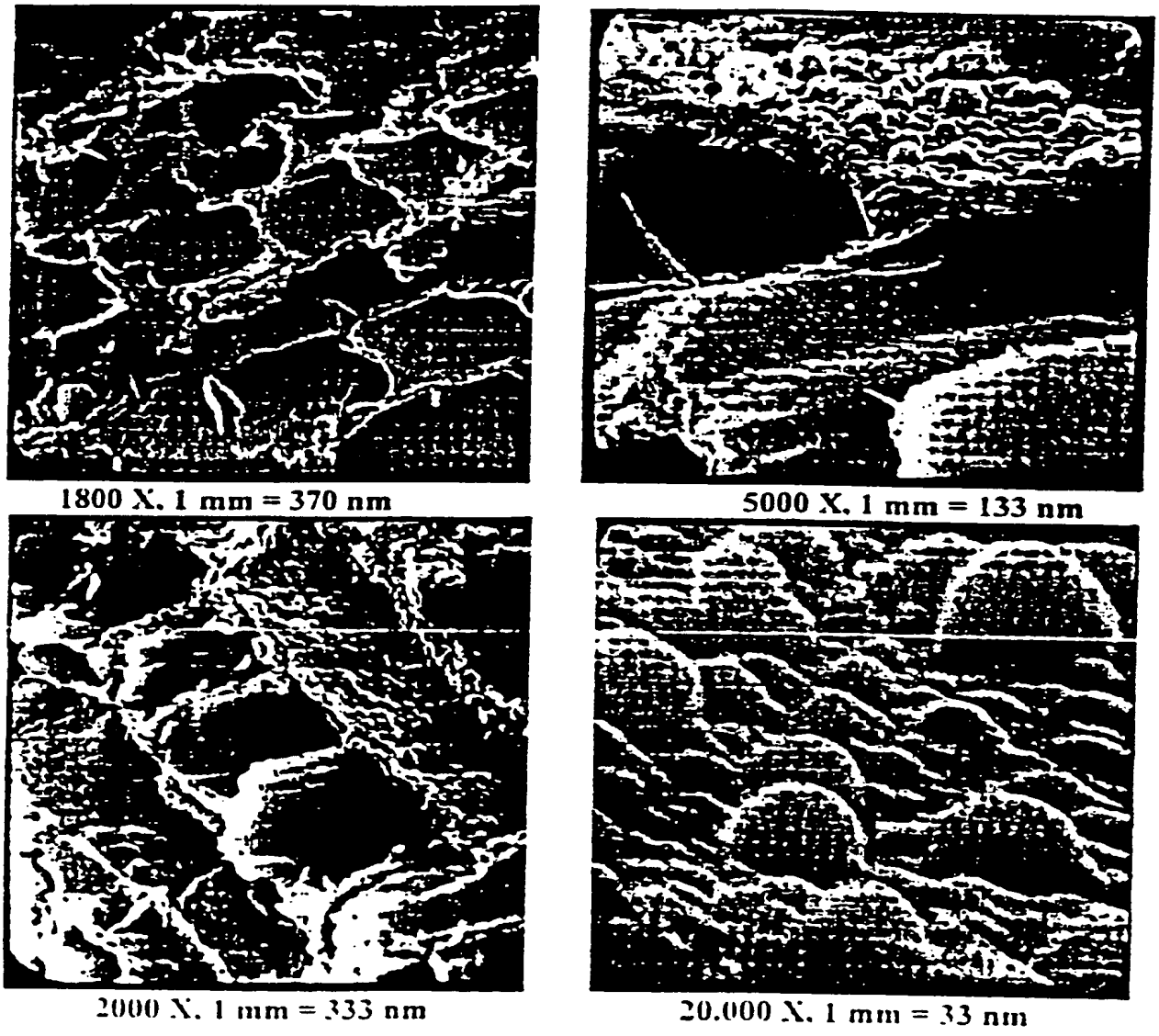
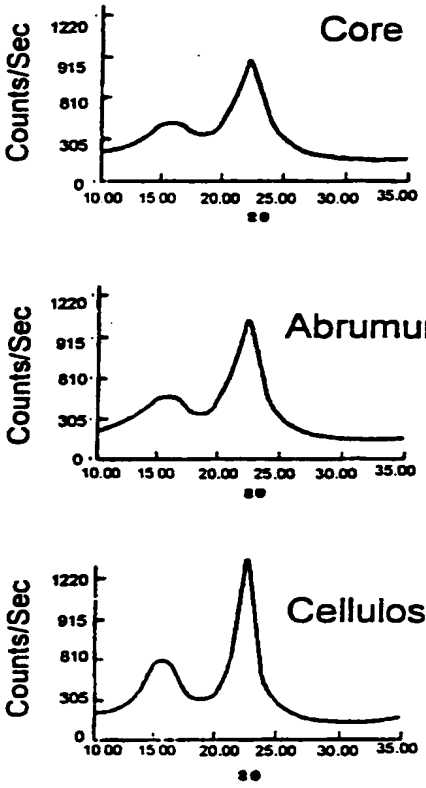


Fig 3e: Microstructure of the cellulignim with globalized lignim

Diffractiom of X-ray of wood and eucalyptus cellulose



Diffractiom of X-ray for cellulignim

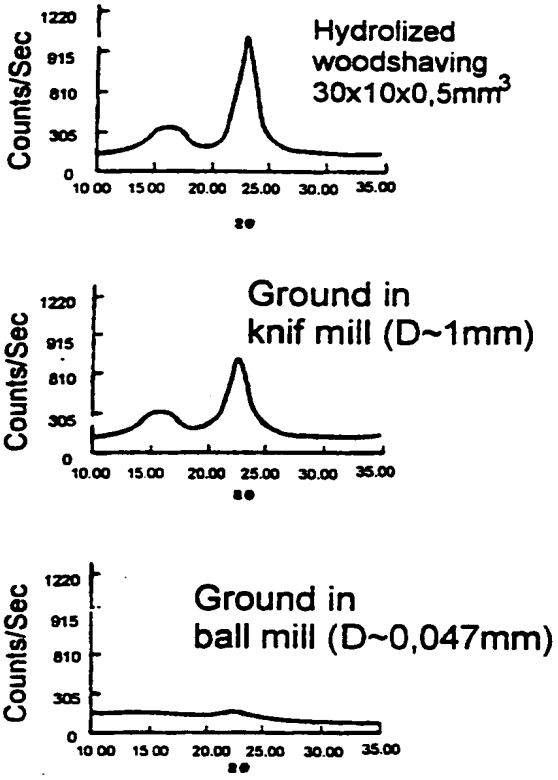


FIG 4 X-Ray diffratogram for wood, cellulose and cellulignin

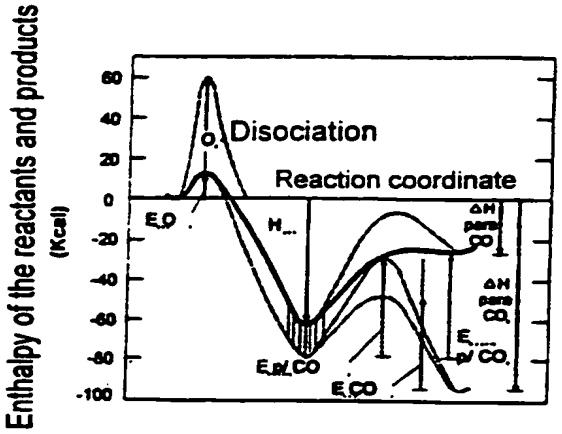


FIG 5 Variation of the Enthalpy of the Reactants and products the coordinate of the Carbon-Oxygen reaction.

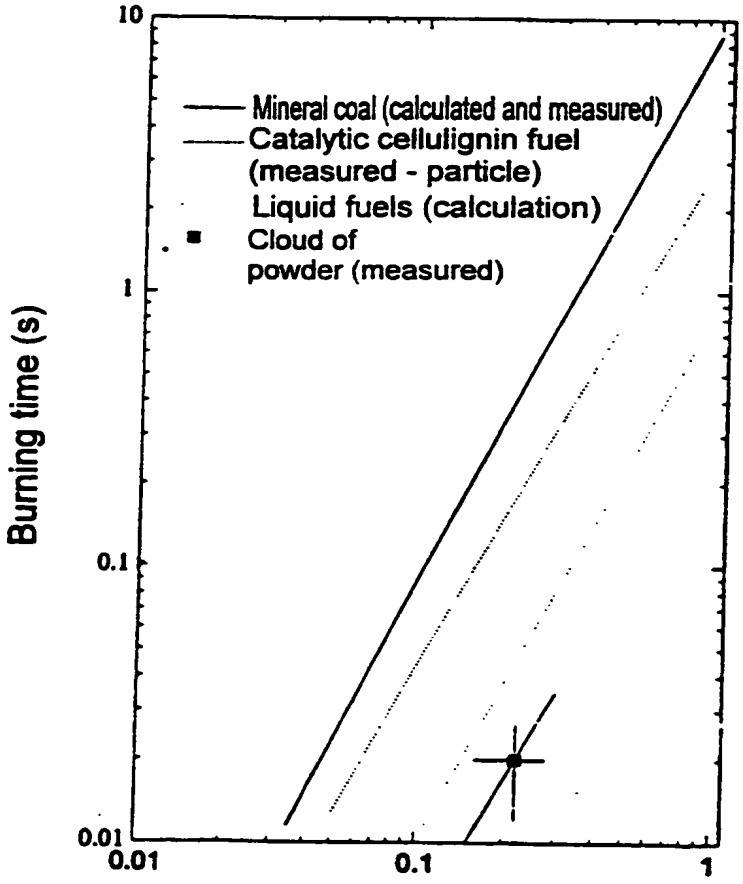


FIG 6 Burning time versus Diameter of particle for mineral coal, catalytic cellulignin fuel, particle and in powder cloud and liquid fuels

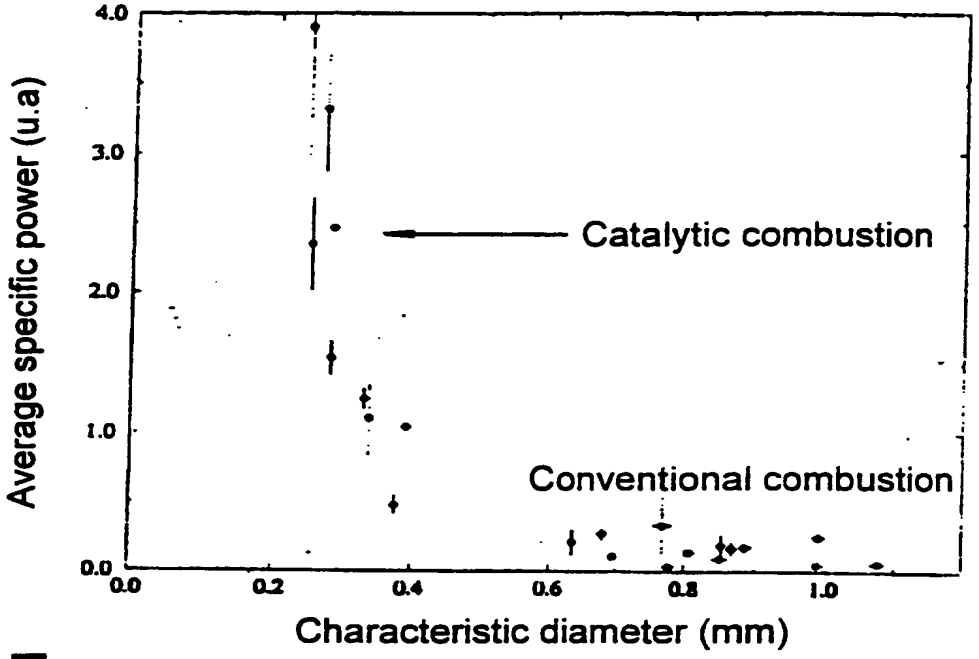


FIG 7a Average specific power irradiated in the combustion a Catalytic Cellulignin particle (linear scale)

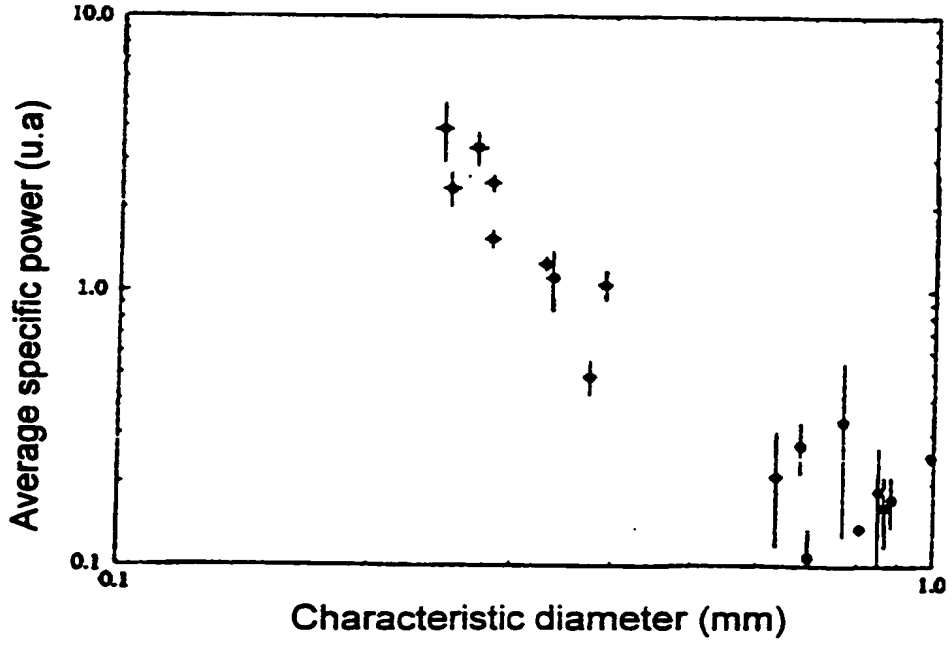


FIG 7b Average specific power irradiated in the combustion a catalytic cellulignin particle (logarithmic scale)

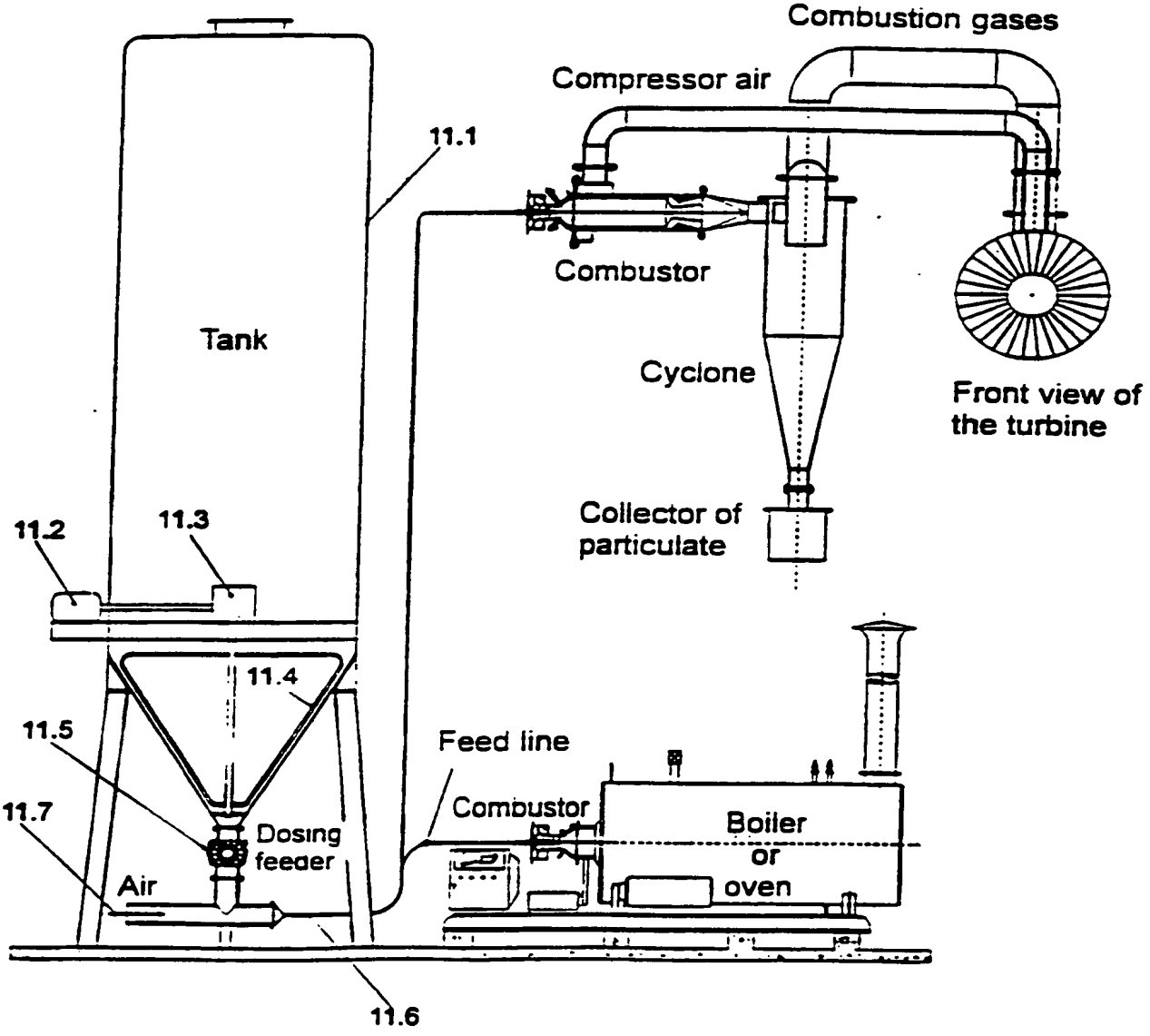


FIG 8 Catalytic Cellulignin feeding system for Boilers/Ovens or gas turbines

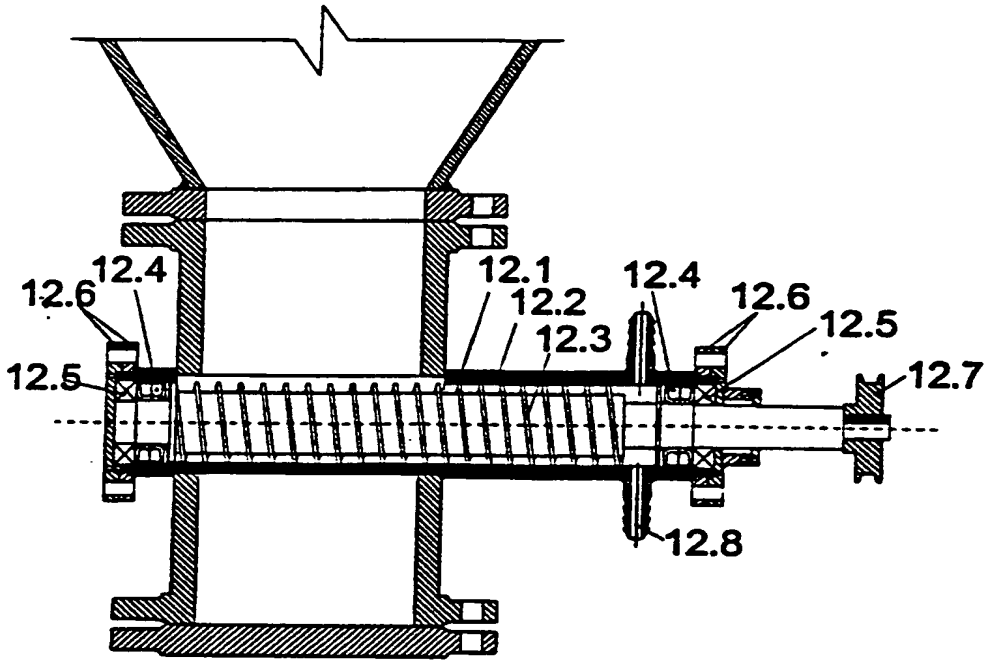


FIG 9 Helical feeder

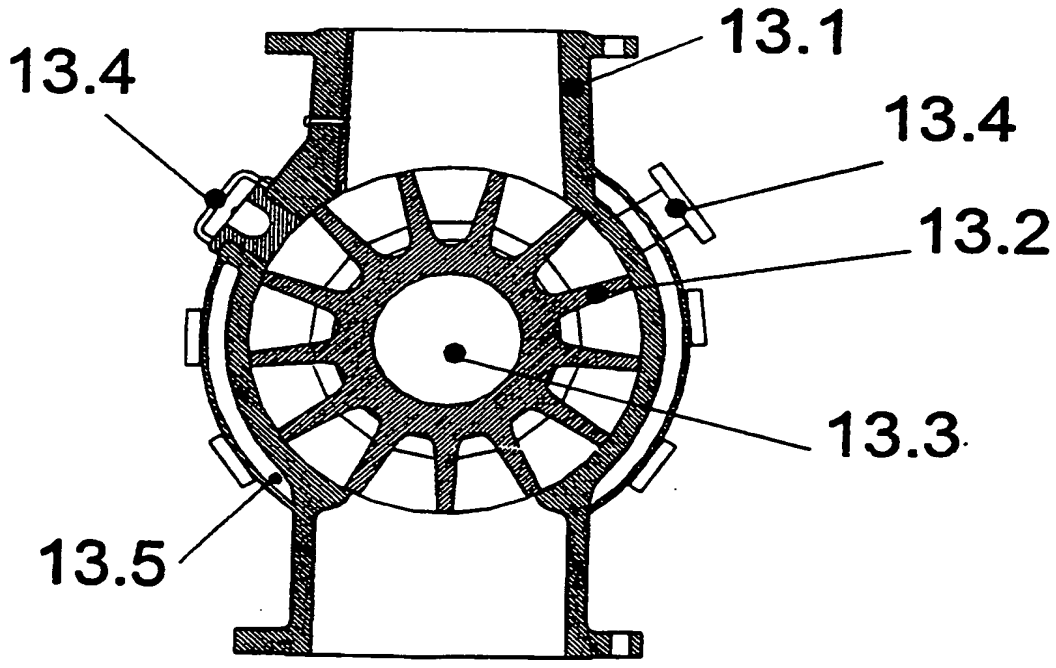


FIG 10 Rotary valve

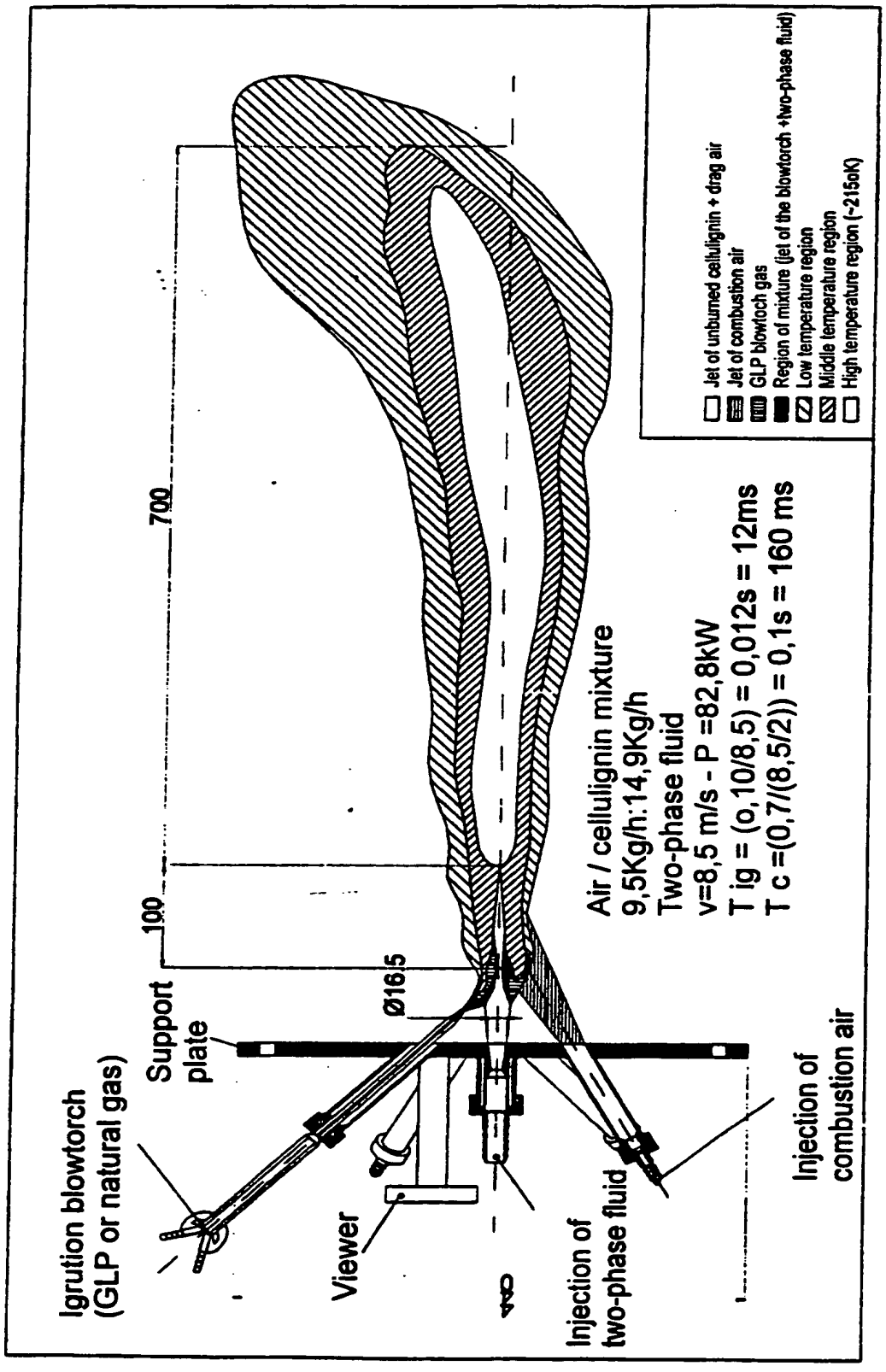


FIG 11 Axial combustor with flame of cellulignin in an open environment

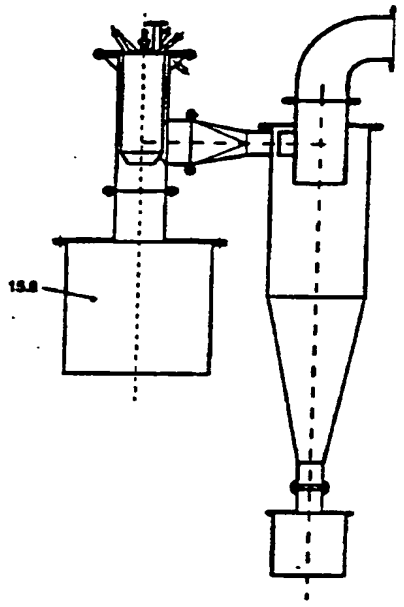


FIG 12a Combustor for cellulignin, cycloning and collection of particulates (horizontal)

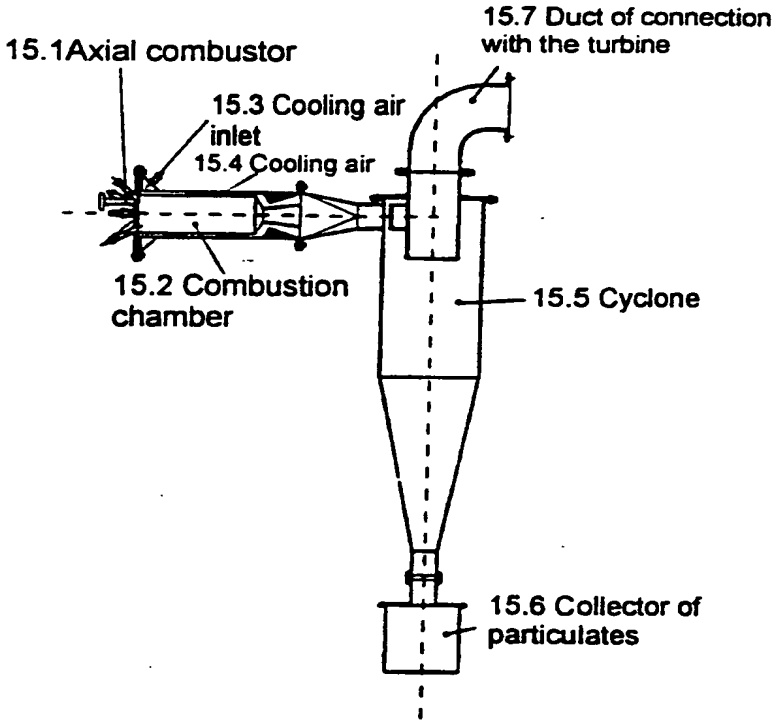


FIG 12b Combustor for cellulignin, cycloning and collection of particulates (vertical)